

Work Order ID 159502***159502***

Page 1

Wednesday, April 12, 2017 12:50:00 PM

Item ID: D3631-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Washer
Start Date: 4/12/2017 Start Qty: 100.00 ***100*** Cust Item ID:
Required Date: 4/18/2017 Req'd Qty: 100.00 ***100*** Customer:
Reference:

Approvals: Process Plan: DAS 13 9-89 Date: APR 12 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3631	Rev A								
100	PURCHASING	0.00							DAS 13 9-89
100									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>35948</u> Purchase Part Number: 95606A170 Supplier: Mc Master Carr Certificate of conformity is required								
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
110									
Packaging	Memo	2.00							
Packaging	Ensure certificate of conformity is attached								
120	QC6- Inspect dimensions to drawing	0.00							
120									
QC	Memo	0.00							
Quality Control									DAS 38 9-89 APR 19 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

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Page 2

Wednesday, April 12, 2017 12:50:00 PM

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: _____	0.00							
130									
Packaging	Memo	1.00							
Packaging	LOCATION : FP001								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	10.00							
Quality Control									

17/4/24

APR 20 2017

DAS
21
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

Wednesday, April 12, 2017 12:50:00 PM

Page 1

Work Order ID: 159502

159502

Parent Item: D3631-1

D3631-1

Parent Item Name: Washer

Start Date: 4/12/2017

Required Date: 4/18/2017

Start Qty: 100.00

Required Qty: 100.00

Comments: IPP Rev:A New Issue 07-07-28 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
95606A170		Purchased	No			110	Each	0.0000	1	100			

95606A170

Washer

100x 817-478.

DQA: _____ Date: _____



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Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		FAULT CATEGORY Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : ☐									

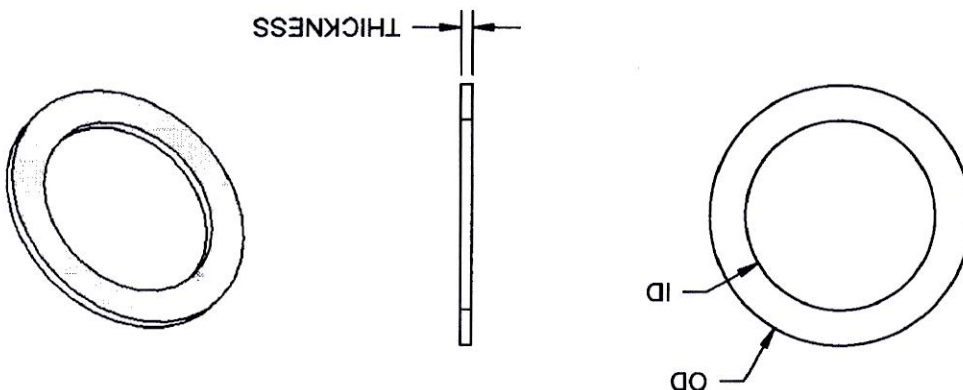
COPYRIGHT © 2007 BY DART AEROSPACE LTD

NOTES:
1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
2) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

PART NUMBER	OD	ID	THICKNESS	MATERIAL	SUPPLIER
D3631-1	0.688	0.500	0.031	NYLON	McMASTER-CARR P/N: 95606A170

RELEASED
07.08.02

D3631-X WASHER



DAS
13
8-89
APR 12 2017
07/01/15/502

SPECIFICATION CONTROL DRAWING

DESIGN	C.B.	DRAWN BY	C.B.	CHECKED	PH	DATE	07.05.16	TITLE	WASHER	SCALE	NTS
DART AEROSPACE LTD	HAWKESBURY, ONTARIO, CANADA	DRAWING NO.	D3631	REV. A	SHEET 1 OF 1	DESCRIPTION	NEW ISSUE	DATE	07.05.16	REV	A

DART

DQA: _____ Date: _____



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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : _____							



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35948

Purchase Order Date 4/12/2017

PO Print Date 4/12/2017

Page Number 1 of 6

Order From :

VU-MCM001

Ship To : DART AEROSPACE LTD

MCMASTER-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

APR 12 2017

Contact Name

Vendor Phone

330 995 5500

Ship To Contact

Ship To Phone

Ship Via:

Purolator ground ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 10

Currency

USD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	92311A599 AS PER DWG D2712 REV. B B159501	SET SCREW	4/17/2017 Yes 4/17/2017		200.00 Each	\$0.20	\$40.52
Line Total:							\$40.52
2	91525A120 AS PER DWG D3456 REV. A B159500	washer	4/17/2017 Yes 4/17/2017		50.00 Each	\$0.25	\$12.52
Line Total:							\$12.52
3	95606A170 AS PER DWG D3631 REV. A B159502	Washer	4/17/2017 Yes 4/17/2017		100.00 Each	\$0.09	\$8.60

DAS
38
9-88

Note:

4/12/2017



200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada
Attention: Dan P, Eric L, Gary, Chantal, Cnc,
Regis

Purchase Order
PO35948

Order Placed By
Chantal Lavoie

McMaster-Carr Number
1831980-02

Page 1 of 2

04/12/2017

Line	Product	Ordered	Shipped
1	92311A599 18-8 Stainless Steel Cup-Point Set Screw 5/16"-24 Thread, 5/8" Long, Packs of 50	4 Packs	4
2	91525A120 316 Stainless Steel Washer Oversized, 1/4" Screw Size, 0.281" ID, 1" OD, Packs of 25	2 Packs	2
3	95606A170 Nylon Plastic Washer for 7/16" Screw Size, 0.5" ID, 0.688" OD, Off-White, Packs of 100	1 Pack	1
5	5963K21 High-Temperature Silicone Rubber Strip Super-Soft, 2" Wide x 36" Long, 1/4" Thick	2 Each	2
6	6391K269 Oil-Embedded Sleeve Bearing for 3/4" Shaft Diameter, 1" OD, 2" Length	4 Each	4
7	91259A705 Alloy Steel Shoulder Screw 1/2" Diameter x 3/8" Long Shoulder, 3/8"-16 Thread Size	20 Each	20
8	91251A242 Black-Oxide Alloy Steel Socket Head Screw 10-24 Thread Size, 1/2" Long, Packs of 100	2 Packs	2
9	7510A653 Plastic Syringe with Luer Lock Tip, 0.34 oz. Capacity, Packs of 10	10 Packs	10
10	7074T3 Swab Cotton, Wood Handle, 1/8" Diameter x 1/2" Long Tip, 6" Overall Length, Packs of 100	10 Packs	10
11	71455K68 9V Alkaline Disposable Batteries, Packs of 12	1 Pack	1
12	71455K63 Size C Alkaline Disposable Batteries, Packs of 72	1 Pack	1
13	5503A15 Ball-End L-Key 5/64" Size	5 Each	5
14	5503A22 Ball-End L-Key 3/16" Size	3 Each	3
15	5503A16 Ball-End L-Key 3/32" Size	3 Each	3
16	98025A133 Zinc Yellow-Chromate Plated Steel Oversized Washer Grade 8, for 1/2" Screw Size, 0.531" ID, 1.062" OD, Packs of 25	2 Packs	2

SP17-4-18

DAS
38
9-89

Shipped separately from our Chicago warehouse on 04/12

4	8631K266 Abrasion-Resistant Polyurethane Rubber Square Bar 48" Long, 3" Thick, 60A Durometer	1 Each	1
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